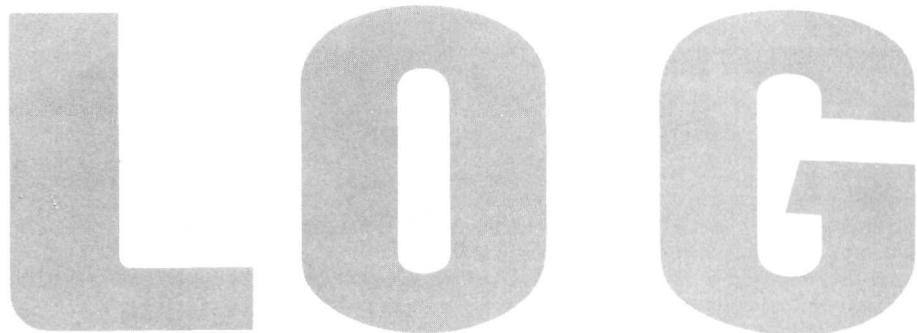


SPRAGUE

THE MARK OF RELIABILITY

a **GK Technologies** subsidiary

DECEMBER, 1980



SPRAGUE ELECTRIC HOSTS INTERNATIONAL TEAM

C. F. JOST

Manager Corporate Quality Assurance Engineering

In the spring of 1981, a world wide system for certifying the quality of electronic components will begin to function with Sprague Electric as the first U.S. manufacturer possessing the required approvals. This system, known as the International Electrotechnical Commission Quality Assessment and Certification, or IECQ system, is based upon a series of Basic Rules or statutes and Rules of Procedure internationally agreed upon, whereby each participating country will qualify component manufacturers operating within its boundaries against international component standards. By obtaining qualification approvals of their products against these standards which contain both parametric and quality requirements, manufacturers will be able to ship components to customers in all participating countries without undergoing incoming inspection activity and subjection to regional standard requirements.

The IECQ system, functioning under the auspices of the 43 member country International Electrotechnical Commission, has 11 countries participating in the initial round or charter member phase. In addition to the United States these countries are: Australia, Belgium, Denmark, France, Germany, Ireland, Israel, Japan, Switzerland and the United Kingdom. Under the system each participating country must possess certain functional elements. Of most significance is the requirement for an enforcement element embodied in a national organization known as the National Supervisory Inspectorate. Each country's NSI is responsible for ensuring that all rules and procedures of the system are properly complied with by the manufacturers which it has qualified. In the United States, Underwriters Laboratories will be the NSI.

Under the start-up procedures of the system, each candidate NSI is to be evaluated by a three-nation examining team by means of an examination visit during which the prospective NSI must show the

team how it would conduct a typical manufacturer approval and component qualification.

For the past three years, our Corporate QAR organization has been working both with U.L. and the Electronic Industries Association of the United States in preparation for this most important event which took place in North Adams on November 10-13. During the three year preparation period Sprague and U.L. developed specific manufacturer qualification and component approval procedures in compliance with the system's rules which were simultaneously being finalized at the international level. These procedures were demonstrated in November to the international examination team, which consisted of representatives from France, Belgium and Japan. Headed by France, this team was established by the International Electrotechnical Commission to specifically examine Underwriters Laboratories. The demonstration consisted of a component qualification testing exercise using Sprague Electric's 135D wet tantalum capacitor in conjunction with a detail IECQ specification developed by Sprague plus a quality system audit of Sprague by U.L. in the presence of the International Team.

As a result of this endeavor the International Team voted to approve U.L. as the U.S. National Supervisory Inspectorate. Concurrently, U.L. has approved Sprague Electric as the first U.S. component manufacturer under the system which effectively guarantees our company a leadership opportunity in the international marketplace for certified quality electronic components.

It is expected that the market for certified products will develop over the next five to ten years as standards become available. As a point of reference it is estimated that imports of electronic components by IECQ countries (less U.S.) in 1980 will total \$7.40 billion.



IECQ EXAMINATION VISIT PARTICIPANTS

Seated left to right: C. Leclercq, Laboratoire Central des Industries Electriques, France; M. Balcaen, Comite Electrotechnique Belge, Belgium; Y. Gomi, Reliability Center for Electronic Components of Japan. Standing left to right: R. J. McDonough, General Foreman, Wet /Foil Tantalum Operation; C. F. Jost, Manager Corporate Quality Assurance Engineering; H. S. Berman, N.S.I. Manager, Underwriters Laboratories; D. R. Karklin, Corporate Director Quality Assurance and Reliability; E. R. Loshak, N.S.I. Deputy Manager, Underwriters Laboratories; A. W. Schaefer, Quality Conformance Inspector, Underwriters Laboratories; J. A. Chiaramonte, Qualification Staff Engineer, Underwriters Laboratories; C. D. Wilson, Superintendent Wet /Foil Tantalum QAR; W. G. Horbert, Quality Assurance Engineer; E. Fairfield, Product Engineering Wet /Foil Tantalum Operation; L. Podolsky, Consultant.



Employees of Sprague Electric, Annapolis Junction, Maryland facility are shown in part of their recently constructed addition that includes a new cafeteria area.

PLANT ACTIVITIES — CONCORD

CONCORD SEMICONDUCTOR MANUFACTURING RALPH SPENCER Manufacturing Manager

"We heard there was going to be a recession but we decided not to participate — instead we are going to work like hell." I read this on a sign someplace and it seems to have been the charter adopted by Concord Semiconductor Manufacturing over the past several months.

Instead of yielding to the temptation of slowing down when orders start to drop off, and worrying about tomorrow, the people took it upon themselves to create their own challenges for today, and really put their shoulders to the grindstone!

The results produced were fantastic. Just to mention a few:

Mechanical yields in assembly are at an all time high, the cost of manufacturing is down. Productivity is up. Pieces per hour are at all time highs in several departments.

The Suggestion System is going great guns! As of this writing, the Concord Plant is #2 in awards standing. The VECR program is 47% ahead of its aggressive target for the year.

Delivery, or turn around time, in the third quarter was reduced 25%. The Energy Conservation Program is flourishing — the Concord Plant has realized a 25% reduction in energy costs.

With all the activity going on it has been hard to realize that a recession was taking place. Even when we had a couple of selected weeks of shutdown in the Assembly Area, the fact that people were willing to do whatever was necessary to get the job done, made it work!

With such a dedicated group of people, the Japanese had better watch out. We are going to give them some competition!



HALLOWEEN IS FUN AT CONCORD — Especially for Lynn Belanger who holds her gun on General Manager Hal Mahar and makes him sit on her little hoss — But fun not only for Lynn, as Hal is enjoying it as much as she is, representing the spirit of good will and participation among all employees at the plant.

SPRAGUE ELECTRIC PLEDGES \$25,000 TO CONCORD HOSPITAL

The Concord Hospital Expansion Program received a significant boost from Sprague Electric as the company pledged \$25,000 to expand and improve medical facilities at the hospital. The overall goal of the hospital is to add 144,000 square feet as new construction and an additional 75,000 square feet in the present structure is to be renovated and modernized. The Sprague gift is among the largest donated from businesses in the community.

Specifically, the gift will be used to build Conference Rooms, Out-Patient Services, a Discharge Office, a Reading Room and a Supervisory Office. Memorial plaques will be displayed in each area donated by the company. The expanded facilities will aid in reducing the crowded conditions at the hospital and improve existing services for all Concord and surrounding communities.



Shown presenting the pledge are, left to right, Harold Maher, General Manager Discrete Semiconductor Operations, William Kuslaka, Concord Industrial Relations Manager, Dr. Horace Blood, General Chairman of the Hospital Expansion Fund, and Martin Daigneault, Plant Manager Concord Tantalum.

BENEFIT FUND VARIETY SHOW

The Sprague Concord employees will stage their 17th annual Benefit Fund Variety Show on January 9 and 10. The theme of this year's show is "A Joyous Year" and begins at a New Year's Eve party featuring Old Man Time and the New Year Baby. Throughout the show the New Year Baby grows up and ends with Old Man Time at another New Year's Eve party.

There will be songs, dances, comedy for each month of the year. Monies received from these shows normally go to the Benefit Fund and ultimately are given out to the local charities. This year the money will go toward a waiting room in the Concord Hospital new addition in the name of Sprague employees.

Our management staff participated fully and this year we have Marty Daigneault, Hal Maher, Bill Kuslaka, Dick Jewell, Nate Chapman and Dennis Stewart, along with many more Sprague employees and their friends.

The show is under the direction of Andy Ansaldo and a night of lively entertainment is promised to all who attend. A very special effort

SPRAGUE ELECTRIC LOG

ISSUE 4, 1980

Norma M. Hays, *Editor*

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James R. Desens, Grafton

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Brownsville

William Williams III, Clinton

Paul F. Sprague — *Photographer*

should be made by all Sprague Concord employees to attend the show since the dedication of the room in the hospital will be on behalf of all employees.



SHOW BUNNIES (L to R) Bill Kuslaka, John Howard, Hal Maher, Marty Daigneault

VOTING CONTEST

To encourage all employees to vote on November 4, Concord offered three \$50.00 Savings Bonds for three voting winners. All employees who voted were given the opportunity to sign up for the contest on November 5 in their department noting the town and ward in which they voted. The Company reserved the right to check to verify the fact that employees did vote. All names were "put in the hat" and the three lucky winners were Dana Call, Tom Chapman and Helga Guthrie.

We hope this contest induced more employees to vote — it certainly looked like a healthy turnout with all the names "in the hat!"

PROJECT PRIDE

Over the past year the Concord Plant has been "spruced up" not only by maintenance but also by many employees as well. Maintenance has put in new tile floors in all rest rooms as well as painting them and installing new ceiling tiles. In addition, they have improved the floors in the main hallways, replacing tiles where needed.

Employees in various areas have newly painted their work areas (on their own time) which makes a brighter and fresher atmosphere in which to work. The "Blue Room" and the pellet press room are two notable examples.

Second shift employees Cindy Menard and Yong Hak Pak painted murals on the walls of the hallway leading from the cafeteria to Hyrel Department which is an inspiring scene for the other employees who made many favorable comments.



PLANT ACTIVITIES — GRAFTON WOMEN PARTICIPATE IN BUSINESS SEMINAR

The University of Wisconsin has been sponsoring a four part seminar for women entitled, "You Can Do It." Thus far a number of female supervisors, administrative individuals and patrol inspectors from the Grafton operation have participated in this worthwhile learning experience. Each session is one day in length and designed to help individuals learn more about a career and advance their careers in today's modern business. Grafton is proud of its female participants.

"SMART CLOCK" GETS SMARTER

Grafton has been working diligently in the past few months trying to get "on board" the system called "Smart Clock." The "Smart Clock" is used in lieu of a time clock with a security badge now serving as both a time card and identification badge.

Hopefully, two important applications, time and attendance, and security access will have proven successful and be operating at an accepted level by December 1, 1980. The "Smart Clock" also has such capabilities as job costing, labor distribution, inventory, work-in-process, employee location, and equipment operation, as well as some custom applications. Unfortunately, at times, the "Smart Clock" is not so smart and this causes impatience and frustrations among the Grafton employees. We hope, in the very near future, "Smart Clock" will have its problems solved, thus creating, for Grafton, a system whereby time and dollars will be saved.

PLANT ACTIVITIES — NORTH ADAMS

EMPLOYEES' BENEFIT FUND AIDS UNITED WAY

The Northern Berkshire United Way Fund has reached approximately 75 percent of its goal and perhaps the single most important contribution this year comes from the Sprague Electric Employees' Benefit Fund. This year's donation from the Employees' Benefit Fund is \$24,000 plus a supplemental addition of \$11,910.

The donation this year was raised from \$20,520 in 1980, to \$24,000 in 1981 with the supplemental amount of \$11,910 for the year 1981 only, making a total donation of \$35,910. In addition, \$3,175 will be donated to the Williamstown Community Chest (not a part of the United Way) in 1981, raising last year's donation of \$2,700 to \$3,175 with a supplemental amount of \$1,550 for the year 1981 only, making a total donation of \$4,725.



Employees' Benefit Fund Administration Committee members: Front Row from left: Barbara Pierce, Arleen O'Connor, Hugh van Zelm, Sylvia Shaw, Gail Dix, Back Row from left: Craig Ghidotti, Pat Sacco, Robert Herzig, John Kirby, Robert Diodati

SPRAGUE SUBSIDIARY RELOCATES

Northern Berkshire Manufacturing Co., a wholly owned subsidiary of Sprague Electric Company, has moved from rented quarters to 79 Marshall Street directly across from the Marshall Street plant. The company was founded in 1958 and purchased by Sprague Electric in 1961. The building at 79 Marshall Street was recently purchased by Sprague Electric and houses a combination show room, office and manufacturing facility, while the basement is used for storage.

Northern Berkshire Manufacturing produces engraved signs, luggage tags, badges and desk plates, police and fire badges, accessories, custom decals and bumper stickers, durable bronze cast plaques, bulletin boards and directories, as well as a complete line of

trophies, plaques and awards for every occasion. Plastic badges and buttons, commemorative coins and tokens (even wooden nickels) for an everlasting memento are available.

Northern Berkshire Manufacturing employs four persons and John G. Brooks, Manager, and makes its products for in-house distribution within Sprague. In addition, it has commercial accounts in Massachusetts, Vermont, Connecticut and New York. The move was made primarily to allow for better display of products for walk-in customers.



Northern Berkshire Manufacturing employees John Luczynski, Betty Serrano, John Brooks, Stella Zawislak and Steve Haskins in their new quarters on Marshall Street.

PLANT ACTIVITIES — VISALIA

HALLOWEEN CELEBRATION

At the Visalia Plant, Halloween is a day for celebration. It is a dress-up day for all employees and dress up they do, as the pictures will attest. There are outer space characters, witches, vampires, star war figures, bunnies, clowns, show biz personalities, and other original and imaginative costumes. The participation in the last several years has been excellent.

Our employee committee selects the winners who are awarded cash prizes for the best costumes. The selections are made early in the day so the participants can remove their masks and return to their duties of meeting customer demands.

Visalia plant also features a "Western Dress-Up Day" in late September when the Visalia Rodeo is held.



Left to right: Esther Garcia, Cindie Hill, Rachel Marsh and Judy Grisham



Left to right: Cynthia Gonzales, Will Merk, Martha Cope and Vicki Streeter

SANFORD SPONSORS ENGLISH CLASSES FOR INDO-CHINESE EMPLOYEES

ELAINE McDONALD
Asst. Industrial Relations Manager

April 29, 1975, a U.S. Navy boat leaves Saigon just one day before Vietnam falls to the communist Viet Cong. Aboard are Vietnamese refugees, among them, Lan & Bich Tran. Destination U.S.A. — a country unknown to them, the language foreign, the life style unlike anything imagined, dramatically different from all they've known since birth. Their choices — face the unknown, leave their war-torn homeland and friends, or stay and face possible assassination.

Lan & Bich's long journey ended in Kennebunk, Maine where they were met by their U.S. sponsor, and where they began building their life in America. The first step toward establishing an independent life was securing a job. It was this need that introduced Sprague Electric Company to Lan & Bich Tran. They joined the Sprague Sanford team on February 17, 1976. This was the beginning of a success story for the Trans and for Sprague Sanford. The Trans had their first job and Sprague Electric Company in Sanford had hired their first Indo-Chinese refugees. Sprague Sanford now employs 35 Indo-Chinese refugees which has proven to be a wise business decision.

Lan & Bich Tran's hard work, excellent work habits and attitudes were key factors in their becoming the skillful and valuable workers they are today. Sprague management's support and especially the efforts and attitudes of our front line supervision contributed to the Tran success on the job. The Trans have also aided Sprague Sanford in hiring other Indo-Chinese refugees through referral of friends; who in turn referred others.

All of our Indo-Chinese employees possess outstanding skills, work habits, and attitudes. They are highly motivated people and reap the advantages of an incentive pay program. Their skill, work habits and attitude are clearly reflected in their paychecks and Sprague Electric Company realizes their efforts from their productive output.

Our Indo-Chinese employees do have problems; the largest handicap being the language barrier. For the most part these people leave their homeland literate and arrive in the U.S. suddenly illiterate. This alone is a situation many people would find difficult to cope with to say nothing of meeting the challenge to overcome.

Sprague Sanford again put their affirmative action program into effect for these people by sponsoring a course designed to help our Indo-Chinese employees and their families speak English.

Several different levels of English were taught during the classes to meet the individual needs of the twenty participants. English was spoken almost exclusively in all classes. Neither of the instructors could speak Vietnamese or Cambodian languages. One instructor, however, spoke middle Chinese, a language most refugees speak or understand, and when necessary made use of this language in teaching the class. Job related English was taught, but the class didn't end there. Students were encouraged to read newspapers, they made trips to the library, obtained library cards, visited various other Sanford establishments and had lessons in U.S. History.

The students' enthusiasm was displayed through regular attendance in the course held at the plant three times per week throughout June, July, and August. Often classes were held outdoors in our employee picnic area. Their enthusiasm did not end after the hour and a half lessons but exhibited itself as they lingered on to talk at length with their instructors. Energetic learners, they were not afraid to make mistakes, they worked hard and they acquired English language skills.

Individual initiative and commitment coupled with additional language skills developed through the Sprague sponsored English course have spurred some of our Indo-Chinese employees to begin work in obtaining their high school diplomas as well as assisting Lan & Bich Tran and others in obtaining their U.S. Citizenship.

The Trans have overcome insurmountable odds. Lan & Bich and their son, Cuong, own their own home in Kennebunk, a car, stereo, television and two friendly family dogs — they've joined the ranks of the average middle American family.

Their's is a success story which by sharing, we hope will provide support and direction for other Indo-Chinese families as well as encourage other Sprague locations to look to and develop this workforce and share in other success stories. Not only is it good human relations, it's good business.

For Sprague Sanford, our experience began with Lan & Bich Tran so it is their story we bring to you. We also want to recognize many other of our Indo-Chinese employees who have their own success stories and accomplishments realized through hard work and commitment. We share in their joy and our hats go off to them.



English Language Class held in picnic area - Sanford Plant. Left to right - Ngoc Lam, Hy La, Bich Tran, Jack Hayes, Instructor, Quyen La, Tran La, & Lan Tran.



English Language Class at Sanford. Shown with Jack Hayes, Instructor are (back to camera) Huy Nguyen, Hoang Minh Trinh, Quang La, Ten Huynh and Buoi Thi La.

MANAGEMENT CHANGES

North Adams: William M. Donelan, Corporate Product Cost Coordinator; Robert Woodacre, Jr., Manager Manufacturing Engineering; Edward J. Duda, Product Engineer; Mariann Driggers, Programmer Analyst; Timothy Driver, Engineer Corp. Calibration & Measurement Services Lab; Harold White, Executive Administrator RDE

Lansing: Lowell T. Miller, Assistant Plant Engineer

Micro Tech: Donald C. Laprad, Equipment Design Engineer

Orlando: Crockett Ryan Smith, Manager Production Planning and Control

Sales: David L. Weiss, Sales Engineer, Chicago; Gerald P. Schmitz, Account Specialist, Chicago; Christopher Kent Moyer, Semiconductor Sales Specialist, Phoenix

Sanford: Stephen Griffin, Production Foreperson; Dennis Driscoll, Production Foreperson

Visalia: Keith W. Oden, Product Specialist

Wichita Falls: Lorraine L. Steinmiller, Work Factor Analyst; Michael Ashley, Process Engineer

Worcester: Henri LeDuc, Jr., Product Engineer; Inna Agranov, Product Engineer

SPRAGUE MANAGER SPEAKER AT INTERNATIONAL CONFERENCE

Joseph A. Moresi, engineering manager of aluminum electrolytic capacitor operations, who makes his headquarters at the company's divisional headquarters in Clinton, Tennessee, was an invited speaker at the inaugural International Conference for Electrolytic Capacitors in Tokyo, Japan on October 15.

The conference was sponsored by the Electrolytic Condenser Investigation Society, a long-standing private association of Japan's major capacitor manufacturers. Mr. Moresi discussed "The Influence of Market and Application Trends on the Advancement of Aluminum Electrolytic Capacitor Technology in Decade 1980" before the group. He is one of a small number of American and European capacitor engineers who were invited to participate in the conference, which has previously been limited to personnel of Japanese manufacturers.

Mr. Moresi, who joined Sprague Electric at its corporate headquarters in North Adams, Mass., was named engineering manager for aluminum electrolytic capacitors in 1969 and moved to Clinton when division headquarters was transferred there in 1978. In the United States, the division operates manufacturing facilities in Clinton; Lansing, N.C.; and Hillsville, Va.

Mr. Moresi is a well-known technical author in the field of aluminum electrolytic capacitors (condensers) and has traveled extensively in Europe and the Far East in connection with his overall responsibility for this important electronic component at Sprague manufacturing plants in Europe and the Far East.

The Sprague delegation also included William E. McLean, executive vice-president, and Marvin Gienger, managing director of the Far Eastern Operations of Sprague World Trade Corporation. Following the conference the Sprague personnel attended the 1980 Japan Electronics Show in Tokyo.

THE SPRAGUE CAPACITOR

By Rufus Bohon — Hillsville

The telephone rings. They ask for Spec.
He draws the plans for what comes next.
I'm on a card and can't yet be seen,
Heading for 6751 and a darned ole machine.
There he sits me! She rolls me! They leave wires in my innards!
Then I'm tested, inspected and sent on to a greater adventure.
Now in this room I really take a rap —
If I'm too long or too short I could wind up in scrap.
Oh boy! I made it! I didn't meet my doom.
I'll be grateful to get out of this room.
I'm carried from there in a plastic pan
To a place where I'm soaked in fluid and poked in a can.
This gasket around my neck is terribly tight —
If that's not enough, I'm stuck in a hot oven and kept overnight!
Sometimes I stay in there for more than a week.
You can bet your booty that will cure a high leak!
Whoa! I forgot to tell you why I act like a wild colt —
I've just been injected with 300 volts!
Now they jostle me, shake me, and hit me with a stick
To see if my innards will ever come unfixed.
Behold — there's a cart coming to get me.
I'm off to the Stamper to get my I.D.
Then on to get a plastic overcoat and red resin top
Because when I get to C. & I. I want to look sharp.
That's the place I've dreaded from the very start.
If I make it through there I won't fall apart.
Now I lie neatly packaged awaiting a long trip.
Oh no — this isn't the end — I'm too full of zip!
I'm off to help guide a rocket or maybe a plane.
I'm used the world over. Do you know my name?
I've pleased my creators — they're beaming with humility!
That's why I wear this sign: "The Mark of Reliability!"

